

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently Amended) In a network supporting packet multicasting from a sender into
2 the network, where hosts join and leave a multicast group by sending join and leave messages,
3 respectively, to an access device in the network, an improvement comprising:
4 a plurality of layers, wherein a layer is a logical channel that carries packets for the multicast
5 group;
6 logic for distributing multicast traffic from the sender over the plurality of layers according
7 to a sending rate associated with each of the plurality of layers;
8 logic for accepting join and leave messages at the access device from the hosts, wherein the
9 join and leave messages are associated with one or more layers of the plurality of
10 layers; and
11 logic for reducing the ~~aggregate~~ sending rate of at least one of the plurality of layers over
12 time.

1 2. (Original) The network of claim 1 further comprising logic for raising the sending
2 rate of an unused layer.

1 3. (Currently Amended) In a network supporting packet multicasting from a sender into
2 the network, where hosts join and leave a multicast group by sending join and leave messages,
3 respectively, to an access device in the network, a method comprising the steps of:
4 accepting multicast join messages at the access device, wherein a join message indicates that
5 a host beyond an interface to the access device requests membership in a layer, where a
6 layer is a logical channel over which packets are multicast to hosts that are members of
7 a multicast group for the layer;
8 transmitting multicast packets to a plurality of layers, wherein multicast packets are
9 transmitted by the sender on a given layer at a rate approximately equal to a sending
10 rate associated with the layer;

11 accepting multicast leave messages at an access device from hosts, wherein a leave message
12 indicates that a host requests removal from a layer indicated in the leave message; and
13 reducing the ~~aggregate~~ sending rates for each of the layers over time, thereby reducing a
14 reception rate of a host that is joined to a fixed set of layers.

1 4. (Currently Amended) The method of claim 3, further comprising a step of offsetting a
2 reduced ~~aggregate~~ reception rate at a host due to a reduced ~~aggregate~~ sending rate ~~at the sender~~
3 for each of the layers by the host joining one or more additional layers, if a reception rate at the
4 host is to be maintained.

1 5. (New) The method of claim 3, wherein the step of reducing the sending rates includes
2 reducing the sending rate for a selected one of the layers to zero.

1 6. (New) The method of claim 5, further comprising a step of increasing the sending rate
2 for the selected one of the layers after an idle period has elapsed.

1 7. (New) The method of claim 6, wherein the idle period is longer than a leave latency
2 associated with the access device responding to a leave message.

1 8. (New) In a network supporting packet multicasting from a sender into the network,
2 wherein hosts join and leave a multicast layer by sending join and leave messages, respectively,
3 to an access device in the network, a method comprising the steps of:
4 transmitting multicast packets to a plurality of dynamic layers at a rate
5 approximately equal to an aggregate sending rate;
6 reducing a sending rate for a first one of the plurality of dynamic layers over time;
7 and
8 concurrently with the step of reducing, increasing a sending rate of at least one
9 other of the plurality of dynamic layers, thereby maintaining the aggregate sending rate for the
10 plurality of dynamic layers.

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- A⁶ 1 9. (New) The method of claim 8, wherein a host connected to the network is able to
2 maintain a reception rate over time by joining the at least one other dynamic layer.
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